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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/524,698	03/14/2000	Alan Tonisson	169.1640	8878

5514 7590 11/19/2003

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER	
AMINI, JAVID A	

ART UNIT	PAPER NUMBER
2672	13

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/524,698	TONISSON, ALAN	
	Examiner	Art Unit	
	Javid A Amini	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 June 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-10,13-33,37,43-45,48-68 and 123-128* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-10,13-33,37,43-45,48-68 and 123-128* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Response to Arguments

Applicant's arguments filed June 23, 2003 have been fully considered but they are not persuasive.

- Response to remarks on page 33: The drawings were received on June 23, 2003. These drawings are 2, 3, 7 and 8. The rejection under 35 U.S.C. 112 second paragraph has been withdrawn.
- Response to remarks on page 35, lines 6-14: Applicant argues that the method of claim 1 reduces the amount of work done by a rendering apparatus by calculating for each compositing operation in an expression to be rendered. And also Applicant argues that the reference Politis does not disclose portion of the claim 1 (the effective region for a particular corresponding compositing operation is equal to the intersection of the further clip region...). Examiner's reply: Politis discloses in (col. 18, lines 53-59) as B's bounding box will always be equal to or smaller than Y in portion 75, and, most often, compositing a complex graphical element will be more difficult than compositing a simple graphical element, this associatively operation will almost always provide a faster or equally fast syntax expression tree to render. Simply changing the pointers from 75 to 76 can change the tree. And also see Fig. 22. Applicant does not illustrate how the method of claim 1 reduces the amount of work done!
- Response to remarks on page 36, lines 6-18: Applicant argues that the reference Politis does not teach the calculation of an intersection region. Examiner's reply: Politis in Fig. 17 illustrates clearly the calculation of bounding boxes of the leaf nodes; the bounding boxes of internal nodes are calculated.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-33, 37, 43-68 and 123-128 are rejected under 35 U.S.C. 102(a) as being anticipated by Politis US patent 5,745,121.

1. Claim 1.

Politis et al., (hereinafter referred as Politis).

As per claim 1 line 5, "determining an active region for each of the graphical objects, each of the active regions being defined by at least one region outline following at least one of the predetermined outlines or parts thereof; Politis in abstract discloses that bounding box methods are used for locating (determining) active areas (region) of graphical elements (objects) from the nodes.

"determining a further active region corresponding to each of the compositing operations, the further active regions being at least dependent upon the active region associated with each operand of the corresponding compositing operation; Politis in (col. 1, lines 56-62) teaches A "graphical context" supplies the attribute values to be associated with each graphical element.

"determining a clip region for each operand of each of the compositing operations, each clip region representing a minimum region in which a corresponding operand contributes to the image and being dependent on a further clip region representing the result of an associated compositing operation", Politis in Col. 12, lines 8-19) discloses as a further implementation optimization, a "clipping stack" of shapes which will be clipped to can be utilized. The

compositing of any graphical element which is not an intermediate result on the rendering stack, is clipped to the intersection of all the clipping shapes on the clipping stack. This increases the efficiency of rendering operations. Therefore, whenever an instruction on a graphical element is generated, for example "load n.operand" or "n.operation n.left-operand", it should be proceeded by any "push clip" and or "pop clip" instructions required to put the clipping stack in a state corresponding to that which the operand needs to be clipped to.

"determining an effective region for at least each of the compositing operations wherein the effective region for a particular corresponding compositing operation is equal to the intersection of the further clip region of the particular corresponding compositing operation and the active regions associated with the operands of the particular corresponding compositing operation;", Politis discloses in (col. 18, lines 53-59) As B's bounding box will always be equal to or smaller than Y in portion 75, and, most often, compositing a complex graphical element will be more difficult than compositing a simple graphical element, this associatively operation will almost always provide a faster or equally fast syntax expression tree to render. Simply changing the pointers from 75 to 76 can change the tree.

As per claim 1 line 11, "and applying the compositing operations to the effective regions to create, the image",

Politis discloses in (col. 1, lines 17-37) that computer generated images are typically made up of many differing components or graphical elements which are "composited" or rendered together to create a final image. Politis discloses in (Figs. 28 and 29) the series of instructions 98 and 87 (expressions representing the effective regions) are representing the effective region.

2. Claim 2,

As per claim 2, "wherein a further region is determined on the basis that a particular region corresponds to a primitive expression", Politis in Fig. 1, discloses an overlap portion 7 is defined to be a combination of the two elements 1,4 and takes a color value which is dependent on the compositing operators combining the two elements to create a more complex image 6.

3. Claim 3,

As per claim 3, "wherein, for those operands that represent graphical objects, the corresponding effective region is the corresponding clip region", Politis in Figs. 30-33 illustrates graphical elements and their corresponding bounding

4. Claim 6,

As per claim 6, "wherein the image is at least in part a pixel-based image", Politis in col. 5, lines 50-63 discloses Color and text graphical elements can include attributes which include: color, whether a solid color, a blend between two colors, or a repeating pixel-based tile.

5. Claim 7,

As per claim 7, "wherein a wholly opaque object in a particular region acts to eliminate one or more operations contributing to at least one other object constituting the particular region, wherein the at least one other object is obscured by the wholly opaque object in a space in which the outlines are defined", Politis illustrates in Fig. 3-4.

6. Claim 8,

As per claim 8 "determining an active region corresponding to each of the graphical objects, each of the active region being defined by at least one region outline following at least one of the predetermined outlines or parts thereof;" Politis in abstract discloses that bounding box methods are used for locating (determining) active areas (region) of graphical elements (objects) from the nodes.

"determininig a further active region corresponding to each of the compositina operations, the further active regions being at least dependent upon the active region associated with each operand of the corresponding compositing operation;" Politis in (col. 1, lines 56-62) teaches A "graphical context" supplies the attribute values to be associated with each graphical element.

"determining a clip region for each operand of each of the compositing operations, each the clip region representing a minimum region in which a corresponding operand contributes to the image and being dependent on a further clip region representing the result of an associated compositing_operation; Politis in Col. 12, lines 8-19) discloses as a further implementation optimization, a "clipping stack" of shapes which will be clipped to can be utilized. The compositing of any graphical element which is not an intermediate result on the rendering stack, is clipped to the intersection of all the clipping shapes on the clipping stack. This increases the efficiency of rendering operations. Therefore, whenever an instruction on a graphical element is generated, for example "load n.operand" or "n.operation n.left-operand", it should be proceeded by any "push clip" and or "pop clip" instructions required to put the clipping stack in a state corresponding to that which the operand needs to be clipped to.

"determining a plurality of effective regions for each of the compositing_operations wherein the effective region for a particular corresponding compositing operation is equal to the intersection of the further clip region of that particular corresponding compositing operation and the active regions associated with the operands of that particular corresponding compositing operation; Politis discloses in (col. 18, lines 53-59) As B's bounding box will always be equal to or smaller than Y in portion 75, and, most often, compositing a complex graphical element will be more difficult than compositing a simple graphical element, this associativity operation will almost

always provide a faster or equally fast syntax expression tree to render. Simply changing the pointers from 75 to 76 can change the tree.

"mapping the effective regions and corresponding compositing operations into a compositing table, comprising a plurality of levels, wherein each level of the compositing table represents at least one of the operators or represents an outline for clipping at least one other level; Politis in tables 1-5 illustrates the claim language of the invention.

"compositing the image using the compositing table." Politis discloses in (col. 1, lines 17-37) that computer generated images are typically made up of many differing components or graphical elements which are "composited" or rendered together to create a final image. Politis discloses in (Figs. 28 and 29) the series of instructions 98 and 87 (expressions representing the effective regions) are representing the effective region.

7. Claim 9.

As per claim 9, "wherein each clip region is further dependent upon an active region of one of the operands of the associated compositing operation, that one operand not being the operand for which the clip region is being determined", Politis in Fig. 1, discloses an overlap portion 7 is defined to be a combination of the two elements 1,4 and takes a color value which is dependent on the compositing operators combining the two elements to create a more complex image 6.

8. Claim 10.

As per claim 10, "wherein, for those operands that represent graphical objects, the corresponding effective region is the corresponding clip region", Politis discloses in abstract that the compositing of opaque graphical elements and associated clipping operations.

9. Claim 13.

As per claim 13, "wherein a level comprising a push operation is added to said the compositing table", Politis illustrates in Figs. 28-29 a push operation is added to the table.

10. Claim 14.

As per claim 14, "wherein a corresponding compositing expression of said the further active region is complex", Politis discloses the corresponding compositing expression further region is complex in see (col. 20, lines 4-64).

11. Claim 15.

As per claim 15, "wherein a level comprising a clip operation is added to the compositing table", Politis discloses in Fig. 24, the clip operation added to table.

12. Claim 16.

As per claim 16, "wherein a further active region is determined on the basis that the corresponding compositing operation has a complex left operand", Politis discloses in (col. 15, lines 64-67 and col. 16, lines 1-5) and equation 1.

13. Claim 17.

As per claim 17, "wherein a level comprising a pop operation is added to the compositing table", Politis illustrates in Fig. 23 that pop operation is added to the table.

14. Claims 18 and 19.

As per claim 18, "wherein the pop operation will remove any unused pixel being outside a further active region representing the complex left operand, during compositing of the complex left operand", Politis discloses in Figs. 30-33 and in (col. 12, lines 21-45) The process of bounding box minimization is further designed to find the smallest area portion of each graphical element that is needed to make up the final image. Bounding box minimization extends to

finding the smallest area of each internal node of the expression syntax tree to flyer minimizes the number of pixels to be composited.

15. Claim 20.

As per claim 20, "wherein the further active region is transformed to an effective region by the pop operation", Politis discloses in (col. 10, lines 45-68) pop the graphical element currently on the top of the stack and use it as the operand to the instruction.

16. Claim 21.

As per claim 21, "wherein the effective region is the effective region of the complex left operand", Politis in Fig. 4 illustrates the complex left operand by "in".

17. Claim 22.

As per claim 22, "wherein the effective region corresponds to a complex expression", Politis in Fig. 4 illustrates it.

18. Claim 23.

As per claim 23, "wherein a level comprising a clip operation is added to the compositing table", Politis discloses in Fig. 24 the clip operation added to table.

19. Claim 24.

As per claim 24, "wherein a further active region is determined on the basis that the corresponding compositing operation has a primitive left operand", Politis in Fig. 4 illustrates the complex left operand by "in".

20. Claim 25.

As per claim 25, "A method according to claim 8, wherein a level comprising an operation and a data fill value of a particular object constituting the further active region, is added to the compositing table", Politis discloses in Fig. 24 the clip operation added to table.

21. Claim 26.

As per claim 26, "wherein the further active region corresponds to a complex expression", Politis in Fig. 4 illustrates it.

22. Claim 27.

As per claim 27, "wherein a level comprising a clip operation is added to the compositing table", Politis discloses in Fig. 24 the clip operation added to table.

23. Claim 28.

As per claim 28, "wherein a level comprising a push operation is added to the compositing table", Politis illustrates in Figs. 28-29 a push operation is added to the table.

24. Claim 29.

As per claim 29, "wherein the compositing table is optimized in regard to the number of pixel operations required to render the image", Politis discloses in Figs. 30-33 and in (col. 12, lines 21-45) The process of bounding box minimization is further designed to find the smallest area portion of each graphical element that is needed to make up the final image. Bounding box minimization extends to finding the smallest area of each internal node of the expression syntax tree to flyer minimizes the number of pixels to be composited.

25. Claim 30.

As per claim 30, "wherein a corresponding compositing expression is a hierarchically structured representation of a particular region represented by the corresponding compositing expression", Politis discloses in Figs. 28-29 a ruling that organized into orders or ranks each subordinate to the one above it.

26. Claim 31.

As per claim 31, "wherein the mapping comprises modifying a manner in which said corresponding compositing expression is evaluated without modifying the hierarchically structured representation", Politis discloses in Figs. 28-29 a ruling that organized into orders or optimize without modifying hierarchically structured representation.

27. Claim 32.

As per claim 32, "wherein the image is at least in part a pixel based image", the step is inherent because the display is combination of pixels therefore, the combination of pixel images is the image itself.

28. Claim 33.

As per claim 33, "wherein a wholly opaque object in a particular region acts to eliminate one or more operations contributing to at least one other object constituting the particular region, wherein the at least one other object is obscured by said wholly opaque object in a space in which the outlines are defined", Politis illustrates in Fig. 3-4.

29. Claim 37.

As per claim 37, "determining an active region for at least each sub-expression of the hierarchically structured compositing expression, each active region being dependent on the predetermined outlines of each graphical object associated with the corresponding sub-expression and on the operators contained in said each sub-expression; determinin a clip region for each operand of each of the sub-expressions, each clip region representing a minimum region in which a corresponding operand contributes to the image and being dependent on a further clip region representing the result of an associated compositing operation; determining an effective region for each of the compositing operations of the hierarchically structured compositing expression, wherein the effective region for a particular corresponding

compositing-operation is equal to the intersection of the further clip region of that particular correspondin compositing operation and the active regions associated with that particular corresponding compositing operation; mapping each the effective region and corresponding compositina operation into a compositing table, comprising a plurality of levels, wherein each level of the compositing table represents at least one of the operators or represents an outline for clipping at least one other level; and evaluating the hierarchically structured compositing expression using said compositing table.

", Politis illustrates in Fig. 16-17 that the first portion of the image to be rendered in the above statements will be the graphical element corresponding to the letter T 20. This rendering will occur on a page 21 and will only occur in a predefined space or "bounding box" 22 which is the only portion of the scan converted portion of T which is to be laid down on the page 21. The next statement 7 combines the current page image with the graphical element corresponding to the letter E 24. Again, this letter by itself has a predetermined bounding box 25. Politis discloses in (col. 9, lines 30-36) the initial expression tree can be likened to a compiler's parse tree; the creation of the render list (active area) can be likened to the code generation phase of a compiler. And also Politis discloses in Fig. 23 that the compositing process for a portion of an expression tree 65. This portion of the expression tree 65 is compiled to the corresponding list of machine instructions 66 (col. 16, lines 9-42). Politis illustrates in Fig. 24 that the process of clipping rather than compositing when the right hand operand is an opaque object (col. 16, lines 9-42). Politis illustrates in Table 1, (col. 2, line 10-57) which for compositing image using compositing table. And also see rejection of claim 8.

30. Claim 43.

As per claim 43, "determining an active regions corresponding to each of said graphical objects, each active region being defined by at least one region outline following at least one of the predetermined outlines or parts thereof; determining a further active region corresponding to each of the compositing operations, further active regions being at least dependent upon the active region associated with each operand of the corresponding compositing operation; determining an effective region for each of the compositing operations wherein the effective region for a particular corresponding compositing operation is equal to the intersection of clip regions associated with that particular corresponding compositing expression and one or more of the active regions associated with the operands of that particular corresponding compositing operation, wherein each clip region represents a minimum region in which a corresponding operand contributes to the image; mapping the effective regions and corresponding compositing operations into a compositing table, comprising a plurality of levels, wherein each level of the compositing table represents at least one of the operators or an outline for clipping at least one other level; and compositing the image using the compositing table", Politis illustrates in Fig. 16-17 that the first portion of the image to be rendered in the above statements will be the graphical element corresponding to the letter T 20. This rendering will occur on a page 21 and will only occur in a predefined space or "bounding box" 22 which is the only portion of the scan converted portion of T which is to be laid down on the page 21. The next statement 7 combines the current page image with the graphical element corresponding to the letter E 24. Again, this letter by itself has a predetermined bounding box 25. Politis discloses in (col. 9, lines 30-36) the initial expression tree can be likened to a compiler's parse tree; the creation of the render list (active area) can be likened to the code generation phase of a compiler. And also Politis discloses in Fig. 23 that the compositing process for a portion of an expression tree 65. This portion of the

expression tree 65 is compiled to the corresponding list of machine instructions 66 (col. 16, lines 9-42). Politis illustrates in Fig. 24 that the process of clipping rather than compositing when the right hand operand is an opaque object (col. 16, lines 9-42). Politis illustrates in Table 1, (col. 2, line 10-57) which for compositing image using compositing table. And also see rejection of claim 8.

31. Claim 44.

As per claim 44, "wherein a each clip region is further dependent upon an active region of one of the operands of the associated compositing operation, that one operand not being, the operand for which the clip region is being determined", Politis in Fig. 1, discloses an overlap portion 7 is defined to be a combination of the two elements 1,4 and takes a color value which is dependent on the compositing operators combining the two elements to create a more complex image 6.

32. Claim 45.

As per claim 45, "wherein, for those operands that represent graphical objects, the corresponding effective region is the corresponding clip region", Politis discloses in abstract that the compositing of opaque graphical elements and associated clipping operations.

33. Claim 48.

As per claim 48, "wherein a level comprising a push operation is added to the compositing table", Politis illustrates in Figs. 28-29 a push operation is added to the table.

34. Claim 49.

As per claim 49, "wherein a corresponding compositing expression of the further active region is complex", Politis discloses the corresponding compositing expression further region is complex in (col. 20, lines 4-64).

35. Claim 50.

As per claim 50, "wherein a level comprising a clip operation is added to the compositing table", Politis discloses in Fig. 24 the clip operation added to table.

36. Claim 51.

As per claim 51, "wherein a further region is determined on the basis that the corresponding compositing operation has a complex left operand", Politis discloses in (col. 15, lines 64-67 and col. 16, lines 1-5) and equation 1. And also see Figs. 3-4.

37. Claim 52.

As per claim 52, "wherein a level comprising a pop operation is added to the compositing table", Politis illustrates in Fig. 23 that pop operation is added to the table.

38. Claim 53.

As per claim 52, "wherein the pop operation will remove any unused pixel being outside a further active region representing the complex left operand, during compositing of the complex left operand", Politis discloses in Figs. 30-33 and in (col. 12, lines 21-45) The process of bounding box minimization is further designed to find the smallest area portion of each graphical element that is needed to make up the final image. Bounding box minimization extends to finding the smallest area of each internal node of the expression syntax tree to flyer minimizes the number of pixels to be composited.

39. Claim 54.

As per claim 54, "wherein the further active region is the active region of the complex left operand", Politis discloses in (col. 10, lines 45-68) pop the graphical element currently on the top of the stack and use it as the operand to the instruction. And also see Figs. 3-4.

40. Claim 55.

As per claim 55, "wherein the further active region is transformed to a still further region by the pop operation", Politis discloses in (col. 10, lines 45-68) pop the graphical element currently on the top of the stack and use it as the operand to the instruction.

41. Claim 56.

As per claim 56, "wherein the effective region is the effective region of the complex left operand", Politis in Figs. 3-4 illustrates it.

42. Claim 57.

As per claim 57, "wherein the effective region corresponds to a complex expression", Politis in Figs. 3-4 illustrates it.

43. Claim 58.

As per claim 58, "wherein a level comprising a clip operation is added to the compositing table", Politis discloses in Fig. 24 the clip operation added to table.

44. Claim 59.

As per claim 59, "wherein a further active region is determined on the basis that the corresponding compositing operation has a primitive left operand", Politis discloses in (col. 8 lines 34-42) that an "infix" or "expression based" approach where primitive graphical elements may be either operated on directly or stored in variables.

45. Claim 60.

As per claim 60, "wherein a level comprising an operation and a data fill value of a particular object constituting the further active region, is added to the compositing table", Politis illustrates in Figs. 28-29 a push operation is added to the table.

46. Claim 61.

As per claim 61, "wherein the further region corresponds to a complex expression", Politis in Figs. 3-4 illustrates it.

47. Claim 62.

As per 62, "wherein a level comprising a clip operation is added to the compositing table", Politis discloses in Fig. 24 the clip operation added to table.

48. Claim 63.

As per claim 63, "wherein a level comprising a push operation is added to the compositing table", Politis illustrates in Figs. 28-29 a push operation is added to the table.

49. Claim 64.

As per claim 64, "wherein the compositing table is optimized in regard to the number of pixel operations required to render the image", Politis discloses in Figs. 30-33 and in (col. 12, lines 21-45) The process of bounding box minimization is further designed to find the smallest area portion of each graphical element that is needed to make up the final image. Bounding box minimization extends to finding the smallest area of each internal node of the expression syntax tree to flyer minimizes the number of pixels to be composited.

50. Claim 65.

As per claim 65, "wherein a corresponding compositing expression is a hierarchically structured representation of a particular region represented by the corresponding compositing expression", Politis discloses in Figs. 28-29 a ruling that organized into orders or ranks each subordinate to the one above it.

51. Claim 66.

As per claim 66, "wherein the mapping comprises modifying a manner in which the corresponding compositing expression is evaluated without modifying the hierarchically

structured representation", Politis discloses in Figs. 28-29 a ruling that organized into orders or optimize without modifying hierarchically structured representation.

52. Claim 67.

As per claim 67, "wherein the image is at least in part a pixel based image", the step is inherent because the display is combination of pixels therefore, the combination of pixel images is the image itself.

53. Claim 68.

As per claim 68, "wherein a wholly opaque object in a particular region acts to eliminate one or more operations contributing to at least one other object constituting said particular region, wherein the at least one other object is obscured by the wholly opaque object in a space in which the outlines are defined", Politis illustrates in Fig. 3-4.

54. Claim 123.

As per claim 123, " determining an active region for at least each sub-expression of the compositing expression, the active region representing a smallest region in which a result of the sub-expression is classified as non-transparent; determining a further active region for at least each sub-expression of the compositing expression, the further active region representing an intersection of all active regions associated with further sub-expressions containing the sub-expression; determining, a clip region at least for each operand of each of the sub-expressions, each clip region representing a minimum region in which a corresponding operand contributes to the image and being dependent on a further clip region representing the result of an associated compositing operation; determining an effective region for each of the nodes, wherein the effective region for a particular node is equal to the intersection of the further clip regions and the active regions associated with the particular node; and applying the

corresponding rendering operations substantially to the effective regions to create the image.", Politis illustrates in Fig. 16-17 that the first portion of the image to be rendered in the above statements will be the graphical element corresponding to the letter T 20. This rendering will occur on a page 21 and will only occur in a predefined space or "bounding box" 22 which is the only portion of the scan converted portion of T which is to be laid down on the page 21. The next statement 7 combines the current page image with the graphical element corresponding to the letter E 24. Again, this letter by itself has a predetermined bounding box 25. Politis discloses in (col. 9, lines 30-36) the initial expression tree can be likened to a compiler's parse tree; the creation of the render list (active area) can be likened to the code generation phase of a compiler. And also Politis discloses in Fig. 23 that the compositing process for a portion of an expression tree 65. This portion of the expression tree 65 is compiled to the corresponding list of machine instructions 66 (col. 16, lines 9-42). Politis illustrates in Fig. 24 that the process of clipping rather than compositing when the right hand operand is an opaque object (col. 16, lines 9-42). Politis illustrates in Table 1, (col. 2, line 10-57) which for compositing image using compositing table. And also see rejection of claim 8.

55. Claim 124.

As per claim 124, "mapping the effective regions and the rendering operations into a compositing table comprising a plurality of levels, wherein each level represents at least one rendering operation for rendering an object or parts thereof or represents an outline for clipping at least one other level; and compositing the image using the compositing table", Politis illustrates in Fig. 23, that a first method of converting an expression tree to corresponding "intermediate level" instructions. Politis illustrates in Figs. 28-29 a push operation is added to the table.

56. Claim 125.

As per claim 125, "wherein the rendering operations include compositing and stack operations", Politis discloses in (col. 9, lines 18-21) for each scan line, the expression tree for the output variable is traversed and rendering of each graphical element and compositing operators is performed as relevant to that scan line.

57. Claim 126.

As per claim 126, "code for determining an active region for at least each sub-expression of the compositing expression, the active region representing a smallest region in which a result of the sub-expression is classified as non-transparent; code for determining a further region for each sub-expression of the compositing expression, the further region representing an intersection of all active regions associated with further sub-expressions containing the sub-expression; code for determining a clip region at least for each operand of at least each of the sub-expressions, each clip region representing a minimum region in which a corresponding operand contributes to the image and being dependent on a further clip region representing the result of an associated compositing operation: code for determining an effective region for each of the nodes, each of the effective regions having a corresponding rendering operation wherein the effective region for a particular node is equal to the intersection of the further clue regions and the active regions associated with the particular node; and code for applying the corresponding rendering operations substantially to the effective regions to create the image", Politis illustrates in Fig. 16-17 that the first portion of the image to be rendered in the above statements will be the graphical element corresponding to the letter T 20. This rendering will occur on a page 21 and will only occur in a predefined space or "bounding box" 22 which is the only portion of the scan converted portion of T which is to be laid down on the page 21. The next statement 7 combines the current

page image with the graphical element corresponding to the letter E 24. Again, this letter by itself has a predetermined bounding box 25. Politis discloses in (col. 9, lines 30-36) the initial expression tree can be likened to a compiler's parse tree; the creation of the render list (active area) can be likened to the code generation phase of a compiler. And also Politis discloses in Fig. 23 that the compositing process for a portion of an expression tree 65. This portion of the expression tree 65 is compiled to the corresponding list of machine instructions 66 (col. 16, lines 9-42). Politis illustrates in Fig. 24 that the process of clipping rather than compositing when the right hand operand is an opaque object (col. 16, lines 9-42). Politis illustrates in Table 1, (col. 2, line 10-57) which for compositing image using compositing table. And also see rejection of claim 8. Politis illustrates in Fig. 16-17 that the first portion of the image to be rendered in the above statements will be the graphical element corresponding to the letter T 20. This rendering will occur on a page 21 and will only occur in a predefined space or "bounding box" 22 which is the only portion of the scan converted portion of T which is to be laid down on the page 21. The next statement 7 combines the current page image with the graphical element corresponding to the letter E 24. Again, this letter by itself has a predetermined bounding box 25. Politis discloses in (col. 9, lines 30-36) the initial expression tree can be likened to a compiler's parse tree, the creation of the render list (active area) can be likened to the code generation phase of a compiler. And also Politis discloses in Fig. 23 that the compositing process for a portion of an expression tree 65. This portion of the expression tree 65 is compiled to the corresponding list of machine instructions 66 (col. 16, lines 9-42). Politis illustrates in Fig. 24 that the process of clipping rather than compositing when the right hand operand is an opaque object (col. 16, lines 9-42). Politis illustrates in Table 1, (col. 2, line 10-57) which for compositing image using compositing table.

58. Claim 127.

As per claim 127, "code for mapping the effective regions and the rendering operations into a compositing table comprising a plurality of levels, wherein each the level represents at least one rendering operation for rendering an object or parts thereof or represents an outline for clipping at least one other level; and code for compositing the image using the compositing table", Politis illustrates in Fig. 23, that a first method of converting an expression tree to corresponding "intermediate level" instructions. Politis illustrates in Figs. 28-29 a push operation is added to the table. See rejection of claim 8.

59. Claim 128.

As per claim 128, "wherein the rendering operations include compositing and stack operations", Politis discloses in (col. 9, lines 18-21) for each scan line, the expression tree for the output variable is traversed and rendering of each graphical element and compositing operators is performed as relevant to that scan line.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-8705 for regular communications and 703-746-8705 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

Javid Amini
November 6, 2003

JEFFERY BRIER
PRIMARY EXAMINER